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AN ANALYSIS OF HURRICANE BETSY

SOUTHERN REGION HEADQUARTERS  
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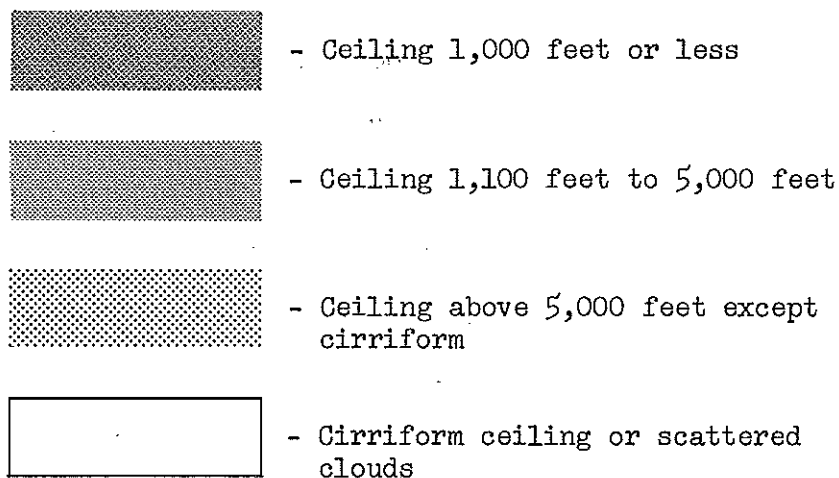


AN ANALYSIS OF HURRICANE BETSY  
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Hourly weather observations from several reporting stations were used to produce analyses of ceiling heights, visibility, precipitation intensity, and surface wind gusts associated with hurricane Betsy of 1965. The data plot was obtained by orienting a coordinate system on the storm center and in the direction of storm movement at hourly intervals. The analyses were made from approximately 280 observations from 14 stations over a 29 hour period from 1200CST September 9, to 1700CST September 10. Betsy was Particularly suited to this type of study because of its rapid movement through the reporting network. The resulting distribution of weather phenomena appears reasonable in view of the lengthy time period involved.

In each of the following figures, concentric circles are drawn to represent 50 nautical mile intervals from the storm center. The arrow from the center outward indicates the direction of the storm movement. An explanation and a few comments accompany each figure.

FIGURE 1 - CEILING HEIGHT DISTRIBUTION



The most outstanding feature here is the ceiling maximum and minimum extending to the left and forward of the center. It appears somewhat unreal but at least four stations bear out its existence. Ceilings 1,000 feet or less are largely confined to within 100 miles of the center. Ceilings in the 1,000 - 5,000 foot range extend approximately twice as far to the right as to the left of the center.

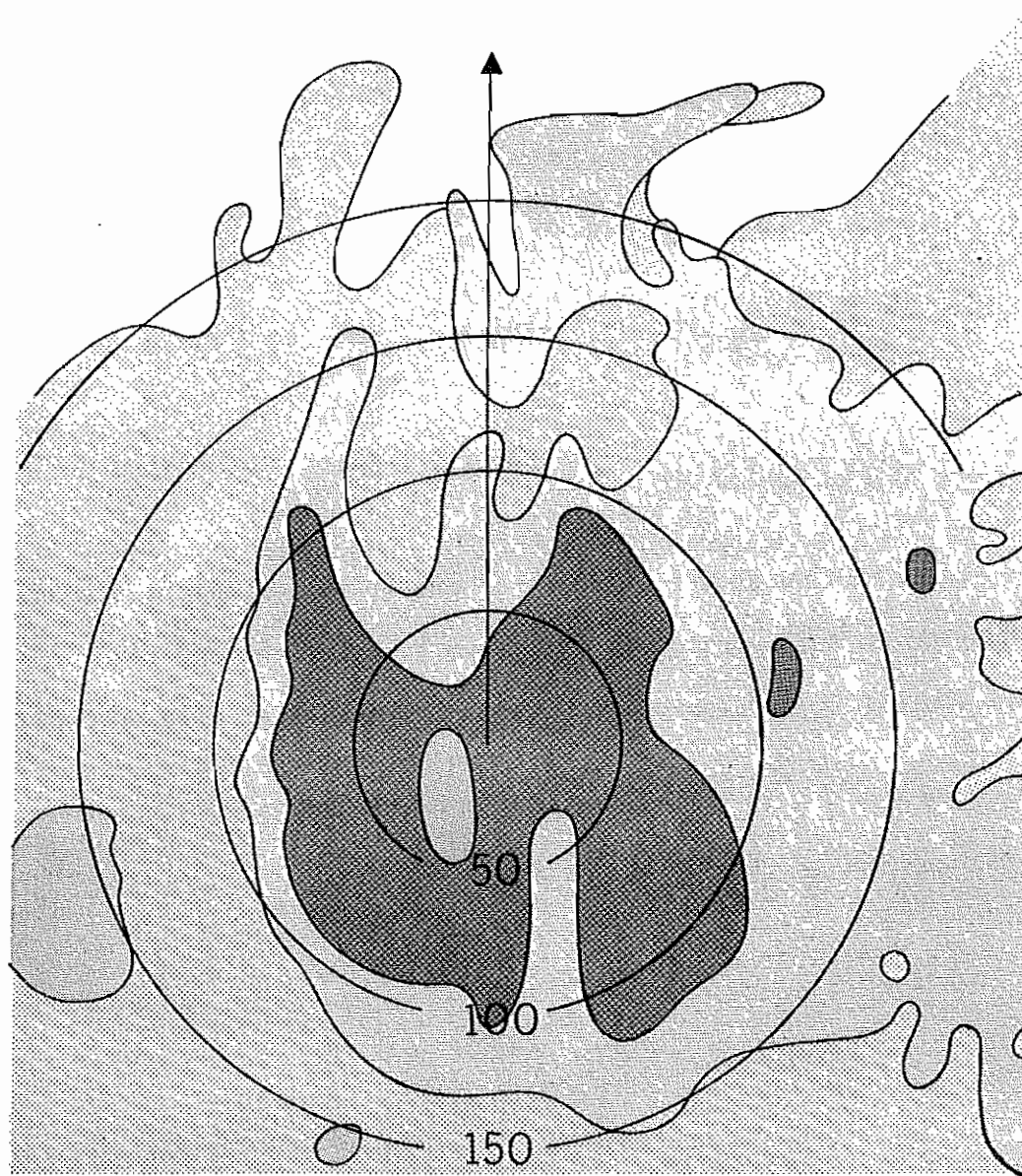
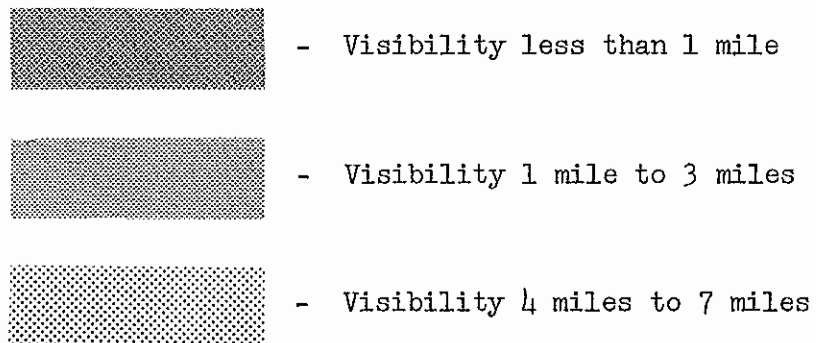


Figure 1

FIGURE 2 - VISIBILITY DISTRIBUTION



Here visibility is chiefly a function of precipitation except for some haze reported in that portion of the storm to the right and rear of the center. Visibility 3 miles or less generally coincided with precipitation of moderate or heavy intensity.

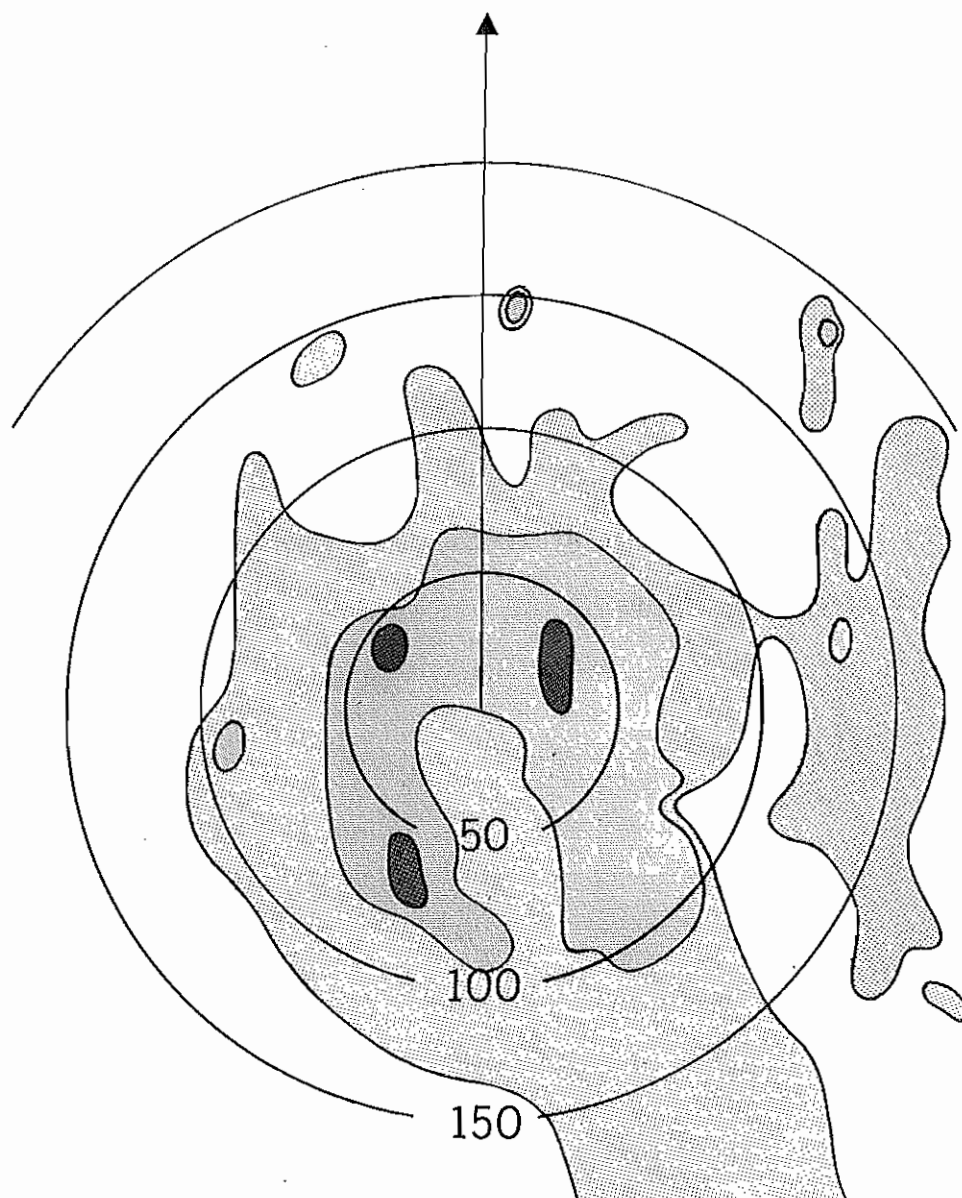
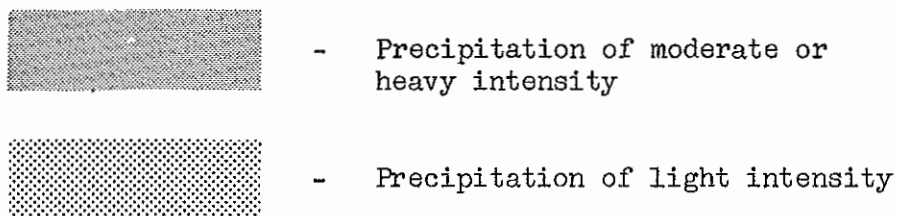


Figure 2

6.

FIGURE 3 - PRECIPITATION INTENSITY DISTRIBUTION



The precipitation pattern is relatively symmetrical with the storm center except for the intensity minimum just to the rear of the center. This feature is supported by three stations, two of which are rather remote in both distance and time.



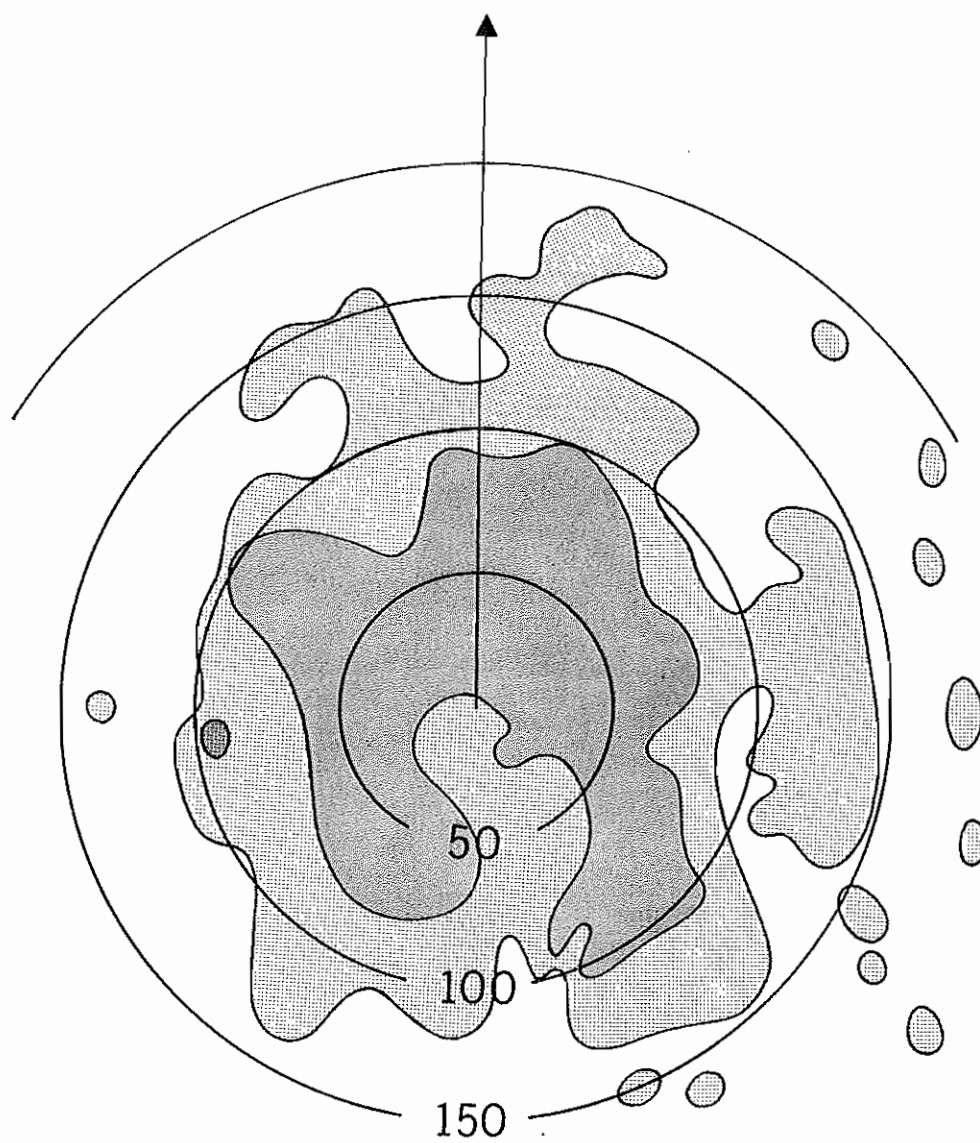
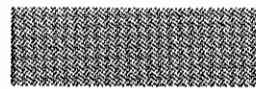


Figure 3

8.

FIGURE 4 - SURFACE WIND GUST DISTRIBUTION



- Surface wind gusts 95 knots or greater



- Surface wind gusts 65-94 knots



- Surface wind gusts 35-64 knots

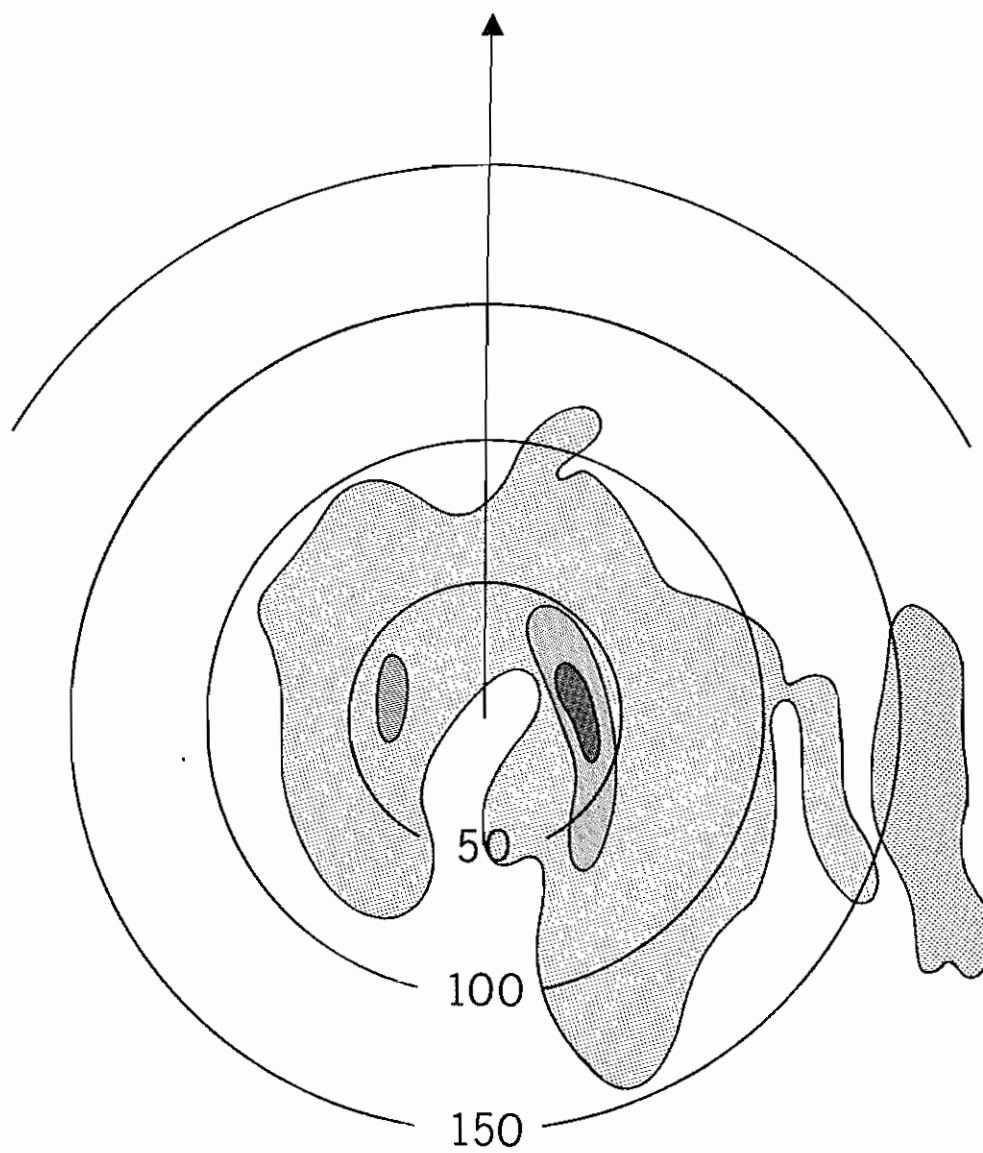


Figure 4

